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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/758,741	01/11/2001	Vincent Leroux	1366 US	9031

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EXAMINER	
DICUS, TAMRA	

ART UNIT	PAPER NUMBER
1774	

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/758,741	LEROUX ET AL.	
	Examiner	Art Unit	
	Tamra L. Dicus	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 May 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 19-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 19-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The finality of the last Office action is withdrawn to include the rejection of claim 4 as argued by Appellant and minor oversights. Thus, prosecution is reopened to correct these matters. The Examiner previously rejected claims 3 and 4 in paragraph 12, line 2, but did not put the claim numbers in the rejection statement. The new office action is presented below to include the claim numbers 3 and 4.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 (amended) -3, 6 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,691,061 to Hanse et al.

Hanse teaches a refractory shape having a coating. The body is of a refractory material (2) having a layer (10) that covers the body partially or completely that is oxidized, also comprising a slagline collar (8) or liner (10) which functions as an insulative coating (includes substantially covering), with a layer of glaze (3) which has the purpose of preventing oxidation of the refractory material during preheating and use. See col. 4, lines 25-40. A bore is defined in Figure 5 (new claim 24). The material contains carbon, a binder, and alumina at col. 4, lines 45-50. At col. 6, lines 50-60, teaches carbon-containing graphite as part of the refractory material. Figures 1 and 6 show a nozzle, thin and curved.

Claims 1 (amended)-3, 6 and 24 (new) are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,370,370 to Benson.

Benson discloses a carbon-bonded, oxide refractory body in the form of a nozzle for use in casting molten metal, such as aluminum-killed steel (see col. 5, line 12+), where sleeve 16 serves as an insulative coating the substantially covers the nozzle forming a second outer surface, where the exterior second surface is coated with a glaze of a glass forming frit material (see col. 6, line 20+). See Figure. A bore is defined in the Figure (new claim 24). Benson discovered that a carbon-bonded, oxide refractory material such as carbon-bonded alumina graphite in the form of a nozzle can be used to form an anti-buildup liner which is resistant to carbon monoxide gas and resistant to the formation and buildup of alumina (see col. 5, line 12+). Benson applies a glaze to the body to protect the exterior surface of the body against oxidation during firing of the nozzle (see col. 6, line 24+).

Claims 1 (amended), 3-4, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,908,577 to Yamamura et al.

Yamamura teaches a nozzle for continuous casting of molten metal. The nozzle body 10 has a first surface (encompasses thin-slab nozzle of claims 3 and 4), the inner wall part 11 is over 10 (functioning as an outer surface, see Figure 1). The inner wall acts as an insulative coating. Yamamura teaches the green ceramic body is fired, inherently producing a glaze over 11 at col. 9, lines 55-60. At col. 4, lines 4-15, a carbon-containing graphite material is taught. A bore is defined in Figures 1-2.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,691,061 to Hanse et al., as applied to claim 1 above, in view of WO 99/65842 to Brandy.

Hanse essentially claims the instant invention. Hanse does not provide an insulative coating composition as that recited in instant claim 5. However, Brandy discloses an insulative coating composition especially suited for refractory materials such as sleeves at page 1, lines 1-20. The coating provided includes the composition of instant claim 5, teaching insulative microspheres in use at page 2, lines 1-10, page 3, lines 20-30, patented claims 1 and 7, providing advantages such as easy application and preventive health measures suitable for casting of molten metal. It would have been obvious to one of ordinary skill in the art to modify the refractive article of Benson to further include a refractive insulative coating composition as instant claim 5 requires because Brandy provides the composition for the purpose of providing advantages such as easy application and preventive health measures suitable for casting of molten metal. That the metal is capable of melting is not germane since it has been held that an element that is "being able to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

Claims 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,691,061 to Hanse et al. in view of WO 99/65842 to Brandy.

Hanse teaches a refractory shape having a coating. The body is of a refractory material (2) having a layer (10) that covers the body partially or completely that is oxidized, also

comprising a slagline collar (8) or liner (10) which functions as an insulative coating (includes substantially covering), with a layer of glaze (3) which has the purpose of preventing oxidation of the refractory material during preheating and use. See col. 4, lines 25-40. A bore is defined in Figure 5 (new claim 24). The material contains carbon, a binder, and alumina at col. 4, lines 45-50. At col. 6, lines 50-60, teaches carbon-containing graphite as part of the refractory material. Figures 1 and 6 show a nozzle, thin and curved.

Hanse does not provide an insulative coating composition as that recited in instant claims 19 and 22. However, Brandy discloses an insulative coating composition especially suited for refractory materials such as sleeves at page 1, lines 1-20. The coating provided includes the composition of instant claim 5, teaching insulative microspheres in use at page 2, lines 1-10, page 3, lines 20-30, patented claims 1 and 7, providing advantages such as easy application and preventive health measures suitable for casting of molten metal. It would have been obvious to one of ordinary skill in the art to modify the refractive article of Hanse to further include a refractive insulative coating composition as instant claim 5 requires because Brandy provides the composition for the purpose of providing advantages such as easy application and preventive health measures suitable for casting of molten metal. That the metal is capable of melting is not germane since it has been held that an element that is "being able to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,370,370 to Benson in view of WO 99/65842 to Brandy, as applied to claim 1 above.

Benson essentially claims the instant invention. As previously stated, Benson does not

provide an insulative coating composition as that recited in instant claim 5. However, Brandy discloses an insulative coating composition especially suited for refractory materials such as sleeves at page 1, lines 1-20. The coating provided includes the composition of instant claim 5, teaching insulative microspheres in use at page 2, lines 1-10, page 3, lines 20-30, patented claims 1 and 7, providing advantages such as easy application and preventive health measures suitable for casting of molten metal. It would have been obvious to one of ordinary skill in the art to modify the refractive article of Benson to further include a refractive insulative coating composition as instant claim 5 requires because Brandy provides the composition for the purpose of providing advantages such as easy application and preventive health measures suitable for casting of molten metal. That the metal is capable of melting is not germane since it has been held that an element that is "being able to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

Claims 19-23 (new) are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,370,370 to Benson in view of WO 99/65842 to Brandy.

Benson discloses a carbon-bonded, oxide refractory body in the form of a nozzle for use in casting molten metal, such as aluminum-killed steel (see col. 5, line 12+), where sleeve 16 serves as an insulative coating the substantially covers the nozzle forming a second outer surface, where the exterior second surface is coated with a glaze of a glass forming frit material (see col. 6, line 20+). See Figure. Benson discovered that a carbon-bonded, oxide refractory material such as carbon-bonded alumina graphite in the form of a nozzle can be used to form an anti-buildup liner which is resistant to carbon monoxide gas and resistant to the formation and buildup of alumina

(see col. 5, line 12+). Benson applies a glaze to the body to protect the exterior surface of the body against oxidation during firing of the nozzle (see col. 6, line 24+).

Benson essentially claims the instant invention. As previously stated, Benson does not provide an insulative coating composition as that recited in instant claim 19 and 22, However, Brandy discloses an insulative coating composition especially suited for refractory materials such as sleeves at page 1, lines 1-20. The coating provided includes the composition of instant claim 5, teaching insulative microspheres in use at page 2, lines 1-10, page 3, lines 20-30, patented claims 1 and 7, providing advantages such as easy application and preventive health measures suitable for casting of molten metal. It would have been obvious to one of ordinary skill in the art to modify the refractive article of Benson to further include a refractive insulative coating composition as instant claim 5 requires because Brandy provides the composition for the purpose of providing advantages such as easy application and preventive health measures suitable for casting of molten metal. That the metal is capable of melting is not germane since it has been held that an element that is "being able to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,908,577 to Yamamura et al., as applied to claim 1 above, in view of WO 99/65842 to Brandy.

Yamamura essentially teaches the claimed invention. Yamamura does not provide the insulative composition of instant claim 5. However, Brandy discloses an insulative coating composition especially suited for refractory materials such as sleeves at page 1, lines 1-20. The coating provided includes the composition of instant claim 5, teaching insulative microspheres in use at page 2, lines 1-10, page 3, lines 20-30, patented claims 1 and 7, providing advantages such

as easy application and preventive health measures suitable for casting of molten metal. It would have been obvious to one of ordinary skill in the art to modify the refractive article of Yamamura to further include a refractive insulative coating composition as instant claim 5 requires because Brandy provides the composition for the purpose of providing advantages such as easy application and preventive health measures suitable for casting of molten metal. That the metal is capable of melting is not germane since it has been held that an element that is "being able to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

Claims 19-23 (new) are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,908,577 to Yamamura et al., as applied to claim 1 above, in view of WO 99/65842 to Brandy.

Yamamura teaches a nozzle for continuous casting of molten metal. The nozzle body 10 has a first surface (encompasses thin-slab nozzle of claim 21), the inner wall part 11 is over 10 (functioning as an outer surface, see Figure 1). The inner wall acts as an insulative coating. Yamamura teaches the green ceramic body is fired, inherently producing a glaze over 11 at col. 9, lines 55-60. At col. 4, lines 4-15, a carbon-containing graphite material is taught. A bore is defined in Figures 1-2.

Yamamura does not provide an insulative coating composition as that recited in instant claims 19 and 22. Brandy discloses an insulative coating composition especially suited for refractory materials such as sleeves at page 1, lines 1-20. The coating provided includes the composition of instant claim 5, teaching insulative microspheres in use at page 2, lines 1-10, page 3, lines 20-30, patented claims 1 and 7, providing advantages such as easy application and preventive health measures suitable for casting of molten metal. It would have been obvious to

one of ordinary skill in the art to modify the refractive article of Yamamura to further include a refractive insulative coating composition as instant claim 5 requires because Brandy provides the composition for the purpose of providing advantages such as easy application and preventive health measures suitable for casting of molten metal. That the metal is capable of melting is not germane since it has been held that an element that is "being able to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

Prior Appeal Brief Defect

In Appellant's Brief, the grouping of claims has not been clearly set forth. Appellant should use the language as required by 37 CFR 1.192 (c) (7) in that the claims do/do not stand or fall together. For example, Appellant states that claim 1 shall represent claims 2-3, 6 and 24. Does Appellant mean that claims 2-3, 6 and 24 stand or fall with claim 1?

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tamra L. Dicus
Examiner
Art Unit 1774

July 19, 2004